

CLAIM AMENDMENTS

IN THE CLAIMS

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

1. (Currently Amended) A production machine system comprising:
a drive,

a control unit for controlling said drive, and

detectors for detecting first and second variables generated during the operation of the machine, said variables fed to said control unit, said control unit comprising a first determination unit to receive said first variable and generate a first setpoint, a conversion unit for generating an intermediate setpoint from said first variable, the second variable being subtracted from said intermediate set point being corrected by the second variable to generate a second setpoint, wherein a machine control unit receives said first and second setpoints to generate a machine control parameter, wherein the drive advances a screw for driving an injection and generating an injection pressure, and wherein the first variable is a position of said drive and the second variable is said injection pressure.

2. (Previously Presented) A production machine system according to Claim 1, wherein the drive is selected from the group consisting of hydraulic, electric and a combination of hydraulic and electric drives.

3. (Currently Amended) An injection molding machine system for the manufacture of plastic parts comprising:

a motor driven advancing screw for driving the injection and generating an injection pressure,

means for detecting and registering the injection pressure and position of said screw as measured variables during operation, and

control means generating a first setpoint from said position variable by a speed/displacement profile and a first intermediate pressure variable from said position variable by a pressure/displacement profile, the pressure variable being subtracted from said first intermediate pressure variable ~~corrected by said pressure variable~~ to generate a second setpoint, wherein said first and second setpoints are fed to a machine control unit for generating a motor control parameter for said motor.

4. (Withdrawn) The injection molding machine according to claim 3 further comprising a mold having at least two positionally dependent variables, wherein at least one speed/displacement profile variable can be predetermined as a positionally dependent setpoint value which can be counteracted if a mold closing pressure/displacement profile variable is exceeded.

5. (Withdrawn) The injection molding machine according to claim 4 further comprising an ejection mechanism in association with the mold, wherein said mechanism has at least two positionally dependent variables and wherein at least one speed/displacement profile variable can be predetermined as a positionally dependent setpoint value which can be counteracted if an ejecting force/displacement profile variable is exceeded.

6-7. (Cancelled)

8. (Previously Presented) A injection molding machine system according to claim 3, wherein the speed/displacement profile and/or the pressure/displacement profile can be predetermined.

9. (Withdrawn) The production machine according to claim 1 comprising the machine components of an industrial press.

10. (**Currently Amended**) A method for the open-loop control of a production machine comprising the steps of:

- determining a first setpoint from at least a first variable by a speed/displacement profile;
- determining an intermediate setpoint from said first variable by a pressure/displacement profile,
- ~~correcting~~ subtracting ~~a second variable from~~ said intermediate setpoint ~~with a second variable~~ to generate a second setpoint; and
- generating a machine control parameter from said first setpoint and said second setpoint.

11. (Cancelled)

12. (Withdrawn) A method according to claim 11 wherein the injection-molding machine further comprises a mold the positional determination of which is a function of the closing/opening speed and for the opening and/or closing pressure of the mold.

13. (Withdrawn) A method according to claim 12 wherein the mold further comprises an ejection mechanism, the positional determination of which is a function of the speed and/or ejection force of the ejection mechanism.

14-17. (Cancelled)

18. (Withdrawn) The method according to claim 10 for use with an industrial press.

19. (Previously Presented) A production machine system according to claim 1, further comprising a further detector for determining a third variable, wherein said conversion unit comprises a second determination unit to generate a first internal variable and a third determination unit to generate a second internal variable from said third variable, and a select unit, controlled by a threshold derived from said first variable, to select said first or second internal variable to generate said intermediate setpoint.

20. (Previously Presented) A production machine system according to claim 19, further comprising a subtraction unit for subtracting said second variable from said selected first or second internal variable, and a function unit for generating said second setpoint receiving an output signal from said subtraction unit.

21. (Previously Presented) A production machine system according to claim 20, wherein the select unit further selects a first or second parameter set which is fed to said function unit.

22. (Withdrawn) A production machine system according to claim 1, further comprising a mold, wherein the drive positions of said mold and the first variable is a position of said mold and the second variable is a mold closing pressure.

23. (Withdrawn) A production machine system according to claim 1, further comprising an ejection mechanism, wherein the drive controls an ejection and the first variable is a position of said ejection mechanism and the second variable is an ejecting force.

24. (Withdrawn) A method according to claim 11, wherein the first variable is the position of a mold, and the first setpoint is a function of the closing/opening speed, and the second variable is a opening and/or closing pressure of the mold.

25. (Withdrawn) A method according to claim 11, wherein the first variable is the position of an ejection mechanism of a mold, the first setpoint is a function of the speed of the ejection mechanism, and the second variable is an ejection force of the ejection mechanism.

26. (Previously Presented) A method according to claim 10, further comprising the steps of:

- generating a second internal variable from a third variable;
- selecting either said first or second internal variable for determining said intermediate setpoint depending on a threshold derived from said first variable.

27. (Previously Presented) A method according to claim 26, further comprising the step of feeding said corrected intermediate setpoint to a function unit for generating said second setpoint.

28. (Previously Presented) A method according to claim 27, wherein said function unit is controlled by a parameter and wherein the parameter is selected by said threshold.

29. (Previously Presented) An injection molding machine system according to claim 3, further comprising a further detector for determining a time variable, wherein the control means generates a second intermediate pressure variable from said time variable, and selects depending on a threshold derived from said position variable said first or second intermediate pressure variable for generating said second setpoint.

30. (Withdrawn) A process machine control system comprising:

a control unit,

a group of sensors in communication with said control unit and various components of the process, said sensors comprising a screw position sensor, optionally a heat sensor to sense the temperature of heating elements located around an area of the screw, an injection pressure sensor to sense the pressure at an end of the screw, a mold holder position sensor, a mold ejector position sensor, and a mold holder motor sensor, wherein said control unit, based on signals from said sensors, controls and adjusts the current to a motor driving a screw.

31. (Previously Presented) A method for the open-loop control of a production machine comprising the steps of:

- determining a first setpoint from at least a first variable by a speed/displacement profile;
- determining a first intermediate setpoint from said first variable by a pressure/displacement profile,
- determining a second intermediate setpoint from a second variable by a pressure/time profile;
- selecting either said first intermediate setpoint or said second intermediate setpoint as a third intermediate setpoint depending on said first variable;
- correcting said third intermediate setpoint with a third variable to generate a second setpoint; and
- generating a machine control parameter from said first setpoint and said second setpoint.

32. (Previously Presented) A method according to claim 31, wherein the step of generating said second setpoint comprising the step of selecting a first set of parameters or a second set of parameters depending on said first variable and modeling said corrected third intermediate setpoint.